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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,842	07/09/2001	Minoru Terano	2001-0466A	7492

513 7590 10/21/2003

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EXAMINER
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TESKIN, FRED M

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No.  
**09/807,842**Applicant(s)  
**Terano, et al.**Examiner  
**Fred Teskin**Art Unit  
**1713**

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Sep 24, 2003
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-31 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_                      6) ☐ Other:

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1. The after-final amendment of September 24, 2003 has been entered, leaving claims 25-31 pending and under examination. The prior art rejection based on Terano et al and the § 112/2d paragraph rejection as set forth in the previous Office action (paper no. 10) have been mooted by the cancellation of claims 1-24 and 32-54.

2. The finality of the previous Office action is **withdrawn** as is the indicated allowability of claims 25-31 in view of the newly discovered prior art to Matthews et al. Rejections based on the new reference follow.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102

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of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25, 29, 30 and 31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Matthews et al 4491652 (hereinafter "Matthews").

Claim 25 is to an elastomer for molding containing polypropylene-b-poly(ethylene-co-propylene), characterized by having (1) a poly(ethylene-co-propylene) segment content of polypropylene-b-poly(ethylene-co-propylene) of 50-95 wt % and (2) a total ethylene content of polypropylene-b-poly(ethylene-co-propylene) of 2.5-95 wt %, wherein the polypropylene-b-poly(ethylene-co-propylene) has the characteristics (a) and (b): (a) polypropylene segments and poly(ethylene-co-propylene) segments are linked chemically; and (b) the polypropylene segments are synthesized in the presence of an olefin polymerization catalyst comprising an organometallic compound and a solid catalyst component comprising either titanium and a halogen or titanium, magnesium and a halogen, and, subsequently, the poly(ethylene-co-propylene) segments are synthesized.

Matthews discloses a thermoplastic elastomer which, in one embodiment, is a sequentially prepared polymer having (A)

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crystalline polypropylene segments of isotactic polypropylene and (B) amorphous segments of elastomeric ethylene-propylene, the (A) and (B) segments being partially block copolymerized to each other, the weight ratio of segments (A) and (B) being within the range of 10:90 to 75:25 and the product being characterized, *inter alia*, by a melting point (via differential thermal analysis) of at least 150°C (col. 1, lines 11-26).

The following points are pertinent to the indicated characteristics of the claimed elastomer:

Characteristic (1): The (A) and (B) segments of the Matthews thermoplastic elastomer correspond respectively to the "polypropylene" and "poly(ethylene-co-propylene)" segments of the recited block copolymer. Further, the aforementioned weight ratio of (A) to (B) segments disclosed by Matthews describes a weight percent range for the (B) segment of from 90 to 25 wt %. This range substantially overlaps the range delimiting content of the poly(ethylene-co-propylene) segment and the upper endpoint of 90 wt % represents a discrete embodiment within the recited range.

Characteristic (2): Each of the "P/EP" products detailed in Examples 1-7 (Table I) of Matthews has an ethylene content well within the recited range of 2.5-95 wt %.

Characteristic (a): The (A) and (B) segments of the Matthews thermoplastic elastomer are deemed to be "chemically linked"

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inasmuch as Matthews states that "said segments (A) and (B) being partially block copolymerized to each other ..." (col. 1, lines 19-21) and that "it is believed the polymerization can take several routes, including addition of ethylene and propylene onto the living polypropylene from the first step" (col. 4, lines 20-22).

Characteristic (b): Matthews details a procedure for sequentially polymerizing propylene and (ethylene-propylene) which corresponds to the synthesis recited as characteristic (b). See especially column 3, lines 28 et seq. and column 4, lines 10-22.

Matthews is thus seen to describe all the essential limitations of claim 25.

In addition, Matthews discloses "P/EP" products (Table I, Examples 1-7) having melting points higher than the minimum  $T_m$  value specified in claim 29; and the utility of such products in injection molding (col. 9, lines 41-43), as called for in claims 30/31.

6. Claims 26-28 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Matthews.

Matthews is applied as in the preceding rejection. Concerning the claimed parameters of  $M_w$ ,  $M_w/M_n$  and xylene-soluble component, Matthews does not give values for these properties.

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Nevertheless, in view of the identity in polymer segments and synthesis procedure as explained above, examiner has reasonable basis to believe the thermoplastic elastomer disclosed by Matthews is same as, or only slightly different from, applicants' elastomer as claimed. Where, as here, there is reason to believe the property or characteristic relied upon for patentability may be inherent in the prior art, the burden properly shifts to applicants to show that the property or characteristic recited in the claims represents an unobvious difference. *In re Best*, 195 USPQ 430 (CCPA 1977).

7. No claims are allowed.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (703) 308-2456. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
FRED TESKIN  
PRIMARY EXAMINER  
1913

FMTeskin/10-20-03